

have endeavored to give the entomology of the Centennial Exhibition as fully as the limited space allowed this article will permit. Geo. Dimmock.

BIBLIOGRAPHICAL RECORD.

Authors and Societies are requested to forward their works to the Editor at the earliest date possible. We ask our readers to inform us of the publication especially of those works which are not generally consulted by entomologists. B. Pickman Mann.

(Continued from page 200.)

Nos. 618 and 619 are from **The Annals and Mag. Nat. Hist.** ser. 4, vols. xvi, xvii.

* 618. A. R. GROTE. The Effect of the Glacial Epoch upon the Distribution of Insects in North America. xvi, p. 440-442.

[Reprint from Amer. Journ. Sci. and Arts, vol. ex (ser. 3, vol. x), p. 335-338.] "A brief statement of the phenomena assumed to have attended the advent of the glacial period," and of "the action presumed to have accompanied" the retirement of the ice-sheet, in the endeavor "to show that the present distribution of certain insects may have been brought about by the phenomena." [Cited also in Rec., Nos. 507 and 586.]

* 619. PROF. T. THORELL. On the Classification of Scorpions. xvii, p. 1-15.

An "attempt at a systematical arrangement of the order of Scorpions, based on the examination of a rather limited number (about 90) of species." Historical and critical review of some previous writings; remarks on nomenclature in general. Defines synoptically 30 genera of 4 families, with citation of types and bibliographical and descriptive foot-notes. Describes *Lepreus*, *Phassus*, *Rhopalurus*, *Hadrurus*, *Iurus*, *Uroctonus*, *Pandinus*, *Palamnaeus*, *Miaophonus*, *Hormurus*, *Ioctonus*, *Euscorpis* = 12 n. gen.; describes 7 (*Vejovis intrepidus* from Mexico, *Uroctonus mordax* from California = 2 N. A.) n. spp. [See PSYCHE, vol. i, p. 209-214.]

* 620. The **Report of the Entomological Society of Ontario, 1873**, including a Report on some of the Noxious, Beneficial and Common Insects of the Province of Ontario. Prepared for the Honourable the Commissioner of Agriculture on behalf of the Society. Printed by Order of the Legislative Assembly. Toronto: 1874. 8vo. pg. 4, 41, fig. 1-31, contains the following, and Nos. 621 to 625.

Title, Contents. Annual business reports and report of the annual meeting; annual address of the President (C. J. S. Bethune) [history of

the Society; doings of the year]; list of honorary members; Editorial (from Can. Entom., v, 181) [announcing change of editorship], p. 1-6.

* 621. W. SAUNDERS. Insects Injurious to the Raspberry. p. 7-17, fig. 1-11.

Treats of *Rhodites radicum*, *Selandria rubi*, *Hyphantria textor*, *Acronyeta verrilli* [corr.], *Aplodes rubivora*, *Lozotaenia rosaceana*, *Pterophorus* sp., *Byturus unicolor*, *Agrilus ruficollis*, *Oberca tripunctata*, *Haltica* (*Crepidodera*) *cucumeris*, *Corimelaena pulicaria*, *Oecanthus niveus*.

* 622. W. SAUNDERS. Insects Injurious to the Strawberry. p. 18-19, fig. 12.

Treats of *Empfytus maculatus*, *Paria seznotata*.

* 623. W. SAUNDERS. On some Innoxious Insects. p. 20-25, fig. 13-18.

Treats of *Papilio turnus*, *Pyrrharetia* (*Spilosoma*) *Isabella*, *Arctia Saundersii*, *Belostoma grandis*, *Julus multistriatus*.

* 624. JOSEPH WILLIAMS. Household Pests. p. 26-33, fig. 19-24.

Treats of *Tinea flavifrontella*, *Culex pipiens?*, *Musca domestica*, *Dermestes lardarius*.

* 625. EDMUND BAYNES REED. On some Common Insects which affect the Horse, the Ox and the Sheep. p. 34-41, fig. 25-31.

Treats of *Oestrus* (*Gasterophilus*) *equi*, *O. bovis*, *Cephalemyia* [corr.] (*Oestrus*) *ovis*.

* 626. The **Annual Rep. Entom. Soc. Ontar.**, for the year 1874. Including Reports on some of the Noxious and Beneficial Insects of the Province of Ontario. Prepared [etc., see Rec., No. 620], 1875. 8vo. pg. iv, 62, fig. 1-46, contains the following, and Nos. 627 to 632.

Title, Contents, p. i-iv. *a.* Annual business reports and reports of the annual meetings of the Society and of the London and Montreal Branches [see Rec., Nos. 85 *b, t*, 397 *a, f*], including report of the meeting and copy of the Constitution of the Entom. Club A. A. A. S. [see Rec., No. 425], p. 1-6. *b.* Annual Address of the President (C. J. S. Bethune) [same as Rec., No. 432], p. 6-9. Introductory, p. 10.

* 627. E. B. REED. Entomological Contributions. p. 11-16, fig. 1-6.

Treats of *Saturnia* (*Hyperchiria*) *Io*, *Chrysobothris femorata*, *Clytus pictus*.

* 628. W. SAUNDERS. Notes of the past season. p. 17-22, fig. 7-16.

Treats of *Nematus ventricosus*, *Ellopi* ("Abraxis") *ribearia*, *Orgyia leucostigma*, the Apple-tree Blight.

* 629. W. SAUNDERS. On some of our Common Insects. p. 22-28, fig. 17-29.

Treats of *Attacus Cecropia* and its enemies, *Ophion macrurum*, *Exorista militaris*, *Chalcis Maria*, *Cryptus nuncius*; treats also of *Colias philodice* and *Deilephila lineata*.

* 630. C. J. S. BETHUNE. Grasshoppers or Locusts. p. 29-42, fig. 30-34.

Confusion in the names locust and grasshopper; figures of *Cicada septendecim*, *Oedipoda migratoria*, *Cyrtophyllum concavum*. History of visitations of locusts, in earlier times, in America, and of the plague of locusts, in 1874, especially in Nebraska, Minnesota, Kansas and Manitoba. Description and figures of *Caloptenus spretus* and *C. femur-rubrum*. Means of reducing the ravages of the locusts.

* 631. W. SAUNDERS. On some Injurious Insects. p. 43-53, fig. 35-41.

Treats of *Carpocapsa pomonella*, remedies for its ravages, and its enemies, *Pimpla annulipes*, *Macrocentrus delicatus* and an unknown larva; treats also of *Selandria cerasi* and means against it.

* 632. C. J. S. BETHUNE. The Grape Vine Phylloxera. (*Phylloxera vastatrix*, Planchon.) p. 54-62, fig. 42-46.

History, description and habits of the insect, and practical considerations concerning it; its enemies, especially *Tyroglyphus phylloxerae*.

* 633. The **Annual Rep. Entom. Soc. Ontar.** for the year 1875. Including Reports on some of the Noxious, Beneficial, and other Insects of the Province of Ontario. Prepared [etc., see Rec., No. 620], 1876. 8vo. pg. 4, 54, fig. 1-29, contains the following, and Nos. 634 to 638.

Title, Contents. *a.* Annual business reports and reports of the annual meetings of the Society and of the London and Montreal Branches [see Rec., No. 446 *g*], p. 1-5. *b.* Annual Address of the President of the E. S. O. (C. J. S. Bethune) [doings of the year; relative prevalence of various destructive insects], p. 5-7. *c.* Annual Address of the President of the Montreal Branch (Wm. Couper) [doings of the year; distribution and immigration of injurious insects], p. 8-10. *d.* Address of the incoming President of the Montreal Branch (G. J. Bowles) [importance of entomology; subjects suggested for investigation], p. 10-13. *e.* Meetings of the Entom. Club A. A. A. S. [same as Rec., No. 511], p. 13-17. *f.* Methods of Subduing Insects Injurious to Agriculture (by J. L. LeConte) [same as Rec., Nos. 508, 583], p. 17-20. *g.* Copy of Memorial [to the U. S. Congress, praying for the appointment of a Commission to investigate the subject of insects injurious to agriculture], p. 20-21. *h.* Our Deceased Members [obituary notices of Francis Walker and P. S. Sprague (see Rec., Nos. 444, 478)], p. 22-24.

* 634. W. SAUNDERS. On Canker Worms. p. 25-28, fig. 1-6.

Summary of what is known resp. *Anisopteryx vernata* and *A. pomataria*; means against them; natural enemies. [*A. vernata* appears in spring only; *A. pomataria* in both fall and spring. B. P. M.]

* 635. W. SAUNDERS. Notes of the Year. p. 29-35, fig. 7-16.

Scarcity of insects generally; habits of *Clisiocampa americana* and *C. sylvatica*; migrations and habits of *Pieris rapae*; chrysalids of *Selandria cerasi* and *Nematus ventricosus* killed by a cold winter, while eggs of *Abraxas ribearia* were uninjured; eastward movements of *Doryphora 10-lineata*; means against all these insects. The Apple Tree Blight [apparently not caused by insects].

* 636. W. SAUNDERS. On some of our Common Insects. p. 36-42, fig. 17-29.

Treats briefly of *Deiopia bella*, *Drasteria erichtea*, *Eudryas grata* (and its parasite *Exorista leucaniae*), *Orthosoma cylindricum*, and more at length of *Telea Polyphemus* (and its parasite *Oplion macrurum*).

* 637. R. V. ROGERS. On some of our Common Insects. The Luna Moth (*Actias Luna*, Linn.). p. 43-44.

[Essentially the same as Rec., Nos. 498, 519.]

* 638. C. J. S. BETHUNE. The Western Locusts. p. 45-54, fig.

Ravages of *Caloptenus spretus* in Manitoba and in the U. S. west of the Mississippi; means of reducing their ravages; locusts as an article of food [see Rec., Nos. 583, 584].

* 639. E. L. MARK. Beiträge zur Anatomie und Histologie der Pflanzenläuse, insbesondere der Cocciden. Inaugural-Dissertation, behufs Erlangung der Doctorwürde vorgelegt der philosophischen Fakultät der Universität Leipzig. Bonn, 1876. 8vo. pg. 58, 1, with three plates (iv-vi).

[Abstract given in PSYCHE, vol. i, p. 193-194.]

The London, Edinburgh, and Dublin Philosophical Magazine and Journal of Science, ser. 4, vols. xlvii, xlix and l [= Nos. cccix-ccciv, ccxxii-cccxxxiv], contains nothing entomological; vol. xlvi [= Nos. cccxv-cccxxi] contains No. 640.

* 640. A. M. MAYER. Researches in Acoustics.—No. V. 3. Experiments on the supposed Auditory Apparatus of the *Culex mosquito*, p. 371-385, fig. 2.

[Reprint of the article cited in Rec., Nos. 189, 281, 614. (See Rec., No. 614.)]